

ABSTRACT OF THE INVENTION

A method of forming a thin film stack on a substrate, wherein the thin film stack includes at least a polysilicon layer and an oxide layer; forming a hardmask layer on the thin film stack; forming an anti-reflective coating (ARC) layer on the hardmask layer; patterning the ARC layer; etching the hardmask layer using the patterned ARC layer as a mask; and etching the thin film stack using the hardmask layer as a mask.